



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/673,504 | 09/30/2003 | Chang-Ho Liou | LIOU3009/EM | 1665 |
| 23364 | 7590 | 06/07/2006 | EXAMINER | |
| BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314 | | | EISEN, ALEXANDER | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2629 | |

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,504

Applicant(s)

LIOU, CHANG-HO

Examiner

Alexander Eisen

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Leroux, US 5,512,915.

With respect to claim 1 Leroux discloses a gate drive device for a display (FIG. 4), the open sequences for a plurality of scan lines in a panel being changed so that open sequences of the plurality of scan lines between the two adjacent gate drivers 42, 44 are being the same (col. 6, ll. 45-50), the drive device comprising a display panel being divided into a plurality of division panels (10 and 12); a plurality of gate drivers 46 and 48 of the plurality of division panels 10 and 12; a plurality of control circuits 42 and 44 for connecting the data drivers and the gate drivers of the plurality of division panels; and a timing control register (not shown, providing control signals HL, DL1 and DL2; col. 6, lines 33-35) connected to the plurality of control circuits by a plurality of control lines; wherein the timing control register is used for controlling the open timings of the scan lines of the plurality of division panels.

As pertaining to claim 2, the open timings of the scan lines in the joining portions of the plurality of upper-lower adjacent division panels are the same.

As pertaining to claim 4, the timing control register is used for temporarily storing the image starting signals of the display panel (see the description of control signals DL1 and DL2 similar to those in col. 5, lines 32-34).

As pertaining to claim 5, the gate drivers 46 and 48 are connected to the plurality of scan lines 1 through 2N of the display panel for controlling.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leroux in view of Mano et al., US 4,985,698, hereinafter Mano.

It is noted that Leroux does not teach left and right division panels.

Mano teaches driving a display panel (FIG. 1) divided into two adjacent sub-panels, left and right, and driven with the same gate scanning timing.

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to apply the technique taught by Mano in the display device of Leroux because it would allow to increase the frame frequency and decrease a flicker (col. 9, lines 14-22).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kota et al., US 2002/0044782, discloses simultaneous driving of upper and lower portions of a display panel.

Kakuta et al., US 6,297,786 B1.

Bowen, US 6,774,868 B1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is (571) 272-7687. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Eisen
Primary Examiner
Art Unit 2629

1 June 2006